

**IN THE CLAIMS:**

**This listing of claims will replace all prior versions:**

1. (Currently Amended)      A method ~~of reading imaging data stored in a detector panel~~, comprising:  
    obtaining imaging data in a detector panel;  
    determining an area of interest for said panel, wherein said area of interest includes a portion of  
    the obtained imaging data, wherein said panel comprises multiple pixel rows, said area of interest  
    comprising more than two and less than all of said multiple pixel rows of said panel; and  
    reading at least a portion of said imaging data, wherein said portion comprises less than all the  
    obtained imaging data and at least a portion of said data from obtained in said determined area of  
    interest.
2. (Original)      The method of claim 1, wherein said determined area of interest comprises less than  
half of all of said multiple pixel rows of said panel.
3. (Original)      The method of claim 1, wherein said panel is divided with one half of said multiple pixel  
rows on one half of said panel and another half of said multiple pixel rows on a remaining half of said  
panel.
4. (Currently Amended)      The method of claim 3, wherein said determined area of ~~interested~~  
interest is also divided with one half on half of said panel and another half on a remaining half of said  
panel.
5. (Original)      The method of claim 4, wherein data in said determined area of interest is read in  
parallel in multiple immediately adjacent rows.

6. (Original) The method of claim 4, wherein data in said determined area of interest is read by row, starting from the center of said panel and reading towards rows remote from said center.
7. (Original) The method of claim 4, wherein said data is read from directly opposing rows in parallel.
8. (Original) The method of claim 1, and further comprising:  
determining said area of interest based at least in part on the dimensions of a subject to be imaged.
9. (Original) The method of claim 1, wherein data from separate panels are read substantially concurrently.
10. (Original) The method of claim 1, and further comprising scrubbing said panel by reading out data from rows outside said determined area of interest.
11. (Original) The method of claim 10, wherein said scrubbing takes place a group of adjacent rows at a time.
12. (Currently Amended) A method of tomographic imaging, comprising:  
emitting radiation from one or more radiation sources towards a subject situated in front of a set of panel detectors;  
as a result of said emitted radiation, at least a portion of at least some of said set of panel detectors having stored data related to said subject;  
reading less than all of said stored data related to said subject from said set of panels, wherein reading less than all of said stored data comprises:

determining an area of interest, wherein said area of interest comprises an area of said set of panel detectors less than the entire area of said set of panel detectors; and  
reading at least a portion of the data contained in said determined area of interest.

13. (Currently Amended) The ~~method~~ method of claim 12, ~~wherein~~ wherein said ~~one~~ one or more radiation sources ~~comprise~~ comprises one or more x-ray sources.

14. (Original) The method of claim 12, wherein said panel detectors comprises flat panel amorphous silicon panels.

15. (Cancelled)

16. (Currently Amended) A method of tomographic imaging, comprising:

emitting radiation from one or more radiation sources towards a subject situated in front of a set of panel detectors so that only a portion of at least some of said set of panel detectors are able to store signals related to said subject;

reading said stored signals related to said subject from said portion of at least some of said set of ~~panels~~ panel detectors, wherein reading said stored signals comprises:

determining an area of interest, wherein said area of interest comprises an area of said set of panel detectors less than the entire area of said set of panel detectors; and  
reading said stored signals contained in said determined area of interest.

17. (Original) The method of claim 16, wherein said one or more radiation sources comprises one or more x-ray sources.

18. (Original) The method of claim 16, wherein said panel detectors comprises flat panel amorphous silicon panels.

19. (Cancelled)

20. (Currently Amended) A tomography system, comprising:

a least one radiation source;

a detector array;

a computer coupled to said detector array, said computer configured to, in operation:

obtain imaging data in said detector array;

determine an area of interest for said detector array, said determined area of interest being less than said entire detector array; and

read data from said determined area of interest.

21. (Original) The tomography system of claim 20, wherein said radiation source comprises an x-ray source.

22. (Original) The tomography system of claim 20, wherein said detector array comprises an array of flat panel amorphous silicon detectors.

23. (Original) The tomography system of claim 20, wherein said system is capable of producing radiological images of a human subjects.

24. (Original) The tomography system of claim 20, said computer is further configured to, in operation:  
determine said area of interest based at least in part on the dimensions of said subject.

25. (Original) The tomography system of claim 20, wherein said computer is further configured to, in operation:

scrub at least the portion of said detector array outside said determined area of interest.

26. (Currently Amended) An article comprising: a storage medium having stored thereon instructions that, when executed, results in a method of reading imaging data stored in a detector panel:

determining an area of interest for said panel, wherein said area of interest includes a portion of the stored imaging data, wherein said panel comprises multiple pixel rows, said area of interest comprising more than two and less than all of said multiple pixel rows of said panel; and

reading at least a portion of said imaging data, wherein said portion comprises less than all the stored imaging data and at least a portion of said data from stored in said determined area of interest.

27. (Original) The article of claim 26, wherein said panel is divided with one half of said multiple pixel rows on one half of said panel and another half of said multiple pixel rows on a remaining half of said panel.

28. (Original) The article of claim 27, wherein said determined area of interest is also divided with one half on half of said panel and another half on a remaining half of said panel.

29. (Original) The article of claim 28, wherein said instructions, when executed, further result in said data in said determined area of interest being read in parallel in multiple immediately adjacent rows.

30. (Original) The article of claim 28, wherein said instructions, when executed, further result in said data in said determined area of interest being read by row, starting from the center of said panel and reading towards rows remote from said center.